



160

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/687,528

DATE: 05/01/2003

TIME: 13:15:57

Input Set : A:\EP.txt

Output Set: N:\CRF4\05012003\1687528.raw

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3 <110> APPLICANT: Stern, David M
             Schmidt, Anne Marie
             Marso, Steven
      5
             Topol, Eric
             Lincoff, A. Michael
      9 <120> TITLE OF INVENTION: A Method for Inhibiting New Tissue Growth in Blood Vessels
in a Patient
             Subjected to Blood Vessel Injury
    12 <130> FILE REFERENCE: 0575-62096/JPW/AJM/AAB
    14 <140> CURRENT APPLICATION NUMBER: 09/687,528
    15 <141> CURRENT FILING DATE: 2000-10-13
    17 <160> NUMBER OF SEQ ID NOS: 6
    19 <170> SOFTWARE: PatentIn version 3.1
                                                                ENTERED
    21 <210> SEQ ID NO: 1
    22 <211> LENGTH: 416
    23 <212> TYPE: PRT
    24 <213> ORGANISM: Cow
    26 <400> SEQUENCE: 1
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    36 Pro Leu Val Leu Asn Cys Lys Gly Ala Pro Lys Lys Pro Pro Gln Gln
    40 Leu Glu Trp Lys Leu Asn Thr Gly Arg Thr Glu Ala Trp Lys Val Leu
    44 Ser Pro Gln Gly Asp Pro Trp Asp Ser Val Ala Arg Val Leu Pro Asn
                           70
                                                75
    48 Gly Ser Leu Leu Pro Ala Val Gly Ile Gln Asp Glu Gly Thr Phe
    49
    52 Arg Cys Arg Ala Thr Ser Arg Ser Gly Lys Glu Thr Lys Ser Asn Tyr
                   100
                                       105
    56 Arg Val Arg Val Tyr Gln Ile Pro Gly Lys Pro Glu Ile Val Asp Pro
               115
                                   120
    60 Ala Ser Glu Leu Met Ala Gly Val Pro Asn Lys Val Gly Thr Cys Val
                               135
    64 Ser Glu Gly Gly Tyr Pro Ala Gly Thr Leu Asn Trp Leu Leu Asp Gly
                           150
                                               155
    68 Lys Thr Leu Ile Pro Asp Gly Lys Gly Val Ser Val Lys Glu Glu Thr
                                           170
                       165
    72 Lys Arg His Pro Lys Thr Gly Leu Phe Thr Leu His Ser Glu Leu Met
                   180
                                       185
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76 Val Thr Pro Ala Arg Gly Gly Ala Leu His Pro Thr Phe Ser Cys Ser
77 195 200 205

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80 Phe Thr Pro Gly Leu Pro Arg Arg Ala Leu His Thr Ala Pro Ile 81 210 215 220	
84 Gln Leu Arg Val Trp Ser Glu His Arg Gly Gly Glu Gly Pro Asn Val	
85 225 230 235 240	
88 Asp Ala Val Pro Leu Lys Glu Val Gln Leu Val Val Glu Pro Glu Gly	
89 245 250 255	
92 Gly Ala Val Ala Pro Gly Gly Thr Val Thr Leu Thr Cys Glu Ala Pro	
93 260 265 270	
96 Ala Gln Pro Pro Gln Ile His Trp Ile Lys Asp Gly Arg Pro Leu	
97 275 280 285	
100 Pro Leu Pro Pro Gly Pro Met Leu Leu Leu Pro Glu Val Gly Pro Glu	
101 290 295 300 104 Asp Gln Gly Thr Tyr Ser Cys Val Ala Thr His Pro Ser His Gly Pro	
104 ASP GIII GIY IIII 1YI SEI CYS VAI AIA IIII HIS PIO SEI HIS GIY PIO 105 305 310 315 320	
108 Gln Glu Ser Arg Ala Val Ser Val Thr Ile Ile Glu Thr Gly Glu Glu	
109 325 330 335	
112 Gly Thr Thr Ala Gly Ser Val Glu Gly Pro Gly Leu Glu Thr Leu Ala	
113 340 345 350	
116 Leu Thr Leu Gly Ile Leu Gly Gly Leu Gly Thr Val Ala Leu Leu Ile	•
117 355 360 365	
120 Gly Val Ile Val Trp His Arg Arg Arg Gln Arg Lys Gly Gln Glu Arg	
121 370 375 380	
124 Lys Val Pro Glu Asn Gln Glu Glu Glu Glu Glu Arg Ala Glu Leu	
125 385 390 · 395 400	
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140 gggacagtca cgggggacca aaacatcaca gcccggatcg ggaagccact ggtgctgaac 142 tgcaagggag cccccaagaa accaccccag cagctggaat ggaaactgaa cacaggccgg	180
142 tycanygyny cecedanyan accaeceday engergyant gynnaetynn caeanyeegy 144 acagaagett ggaaagteet gteteeceag ggagaeceet gggatagegt ggetegggte	240
146 ctccccaacg gctccctcct cctgccggct gttgggatcc aggatgaggg gactttccgg	300
148 tgccgggcaa cgagccggag cggaaaggag accaagtcta actaccgagt ccgagtctat	360
150 cagatteetg ggaagecaga aattgttgat cetgeetetg aacteatgge tggtgteece	420
152 aataaggtgg ggacatgtgt gtccgagggg ggctaccctg cagggactct taactggctc	480
154 ttggatggga aaactctgat tcctgatggc aaaggagtgt cagtgaagga agagaccaag	540
156 agacacccaa agacagggct tttcacgctc cattcggagc tgatggtgac cccagctcgg	600
158 ggaggagete tecaceceae etteteetgt agetteaeee etggeettee eeggegeega	660
160 gccctgcaca cggcccccat ccagctcagg gtctggagtg agcaccgagg tggggagggc	720
162 cccaacgtgg acgctgtgcc actgaaggaa gtccagttgg tggtagagcc agaaggggga	780
164 gcagtagete etggtggtae tgtgacettg acetgtgaag eeceegecea geeceeacet	840
166 caaatccact ggatcaagga tggcaggccc ctgccccttc cccctggccc catgctgctc	900
168 ctcccagagg tagggcctga ggaccaggga acctacagtt gtgtggccac ccatcccagc	960
170 catgggccc aggagagccg tgctgtcagc gtcacgatca tcgaaacagg cgaggagggg	1020
172 acgactgcag gctctgtgga agggccgggg ctggaaaccc tagccctgac cctggggatc	1080

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176 178 180 182 184 187	ctgggaggcc tggggacagt cgccctgctc attggggtca tcgtgtggca tcgaaggcgg caacgcaaag gacaggagag gaaggtcccg gaaaaccagg aggaggaaga ggaggagaga gcggaactga accagccaga ggagcccgag gcggcagaga gcagcacagg agggccttga ggagcccacg gccagacccg atccatcagc cccttttctt ttcccacact ctgttctggc cccagaccag ttctcctctg tataatctcc agcccacatc tcccaaactt tcttccacaa ccagagcctc ccacaaaaag tgatgagtaa acacctgcca cattta <210> SEQ ID NO: 3 <211> LENGTH: 404													1140 1200 1260 1320 1380 1426			
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				ISM: NCE:		211											
						Δla	Val	Glv	Δla	Tro	Val	Len	Va 1	Leu	Ser	Len	
195	_	1114	mu	017	5	u	, , ,	011	u	10		200	,	Deu	15	204	
		Glv	Ala	Val	_	Glv	Ala	Gln	Asn		Thr	Ala	Ara	Ile		Glu	
199		1		20		1			25				5	30	1		
	Pro	Leu	Val		Lvs	Cvs	Lvs	Gly	Ala	Pro	Lys	Lvs	Pro	Pro	Gln	Arq	
203			35			- 4	4	40			-	*	45			3	
206	Leu	Glu	Trp	Lys	Leu	Asn	Thr	Gly	Arg	Thr	Glu	Ala	Trp	Lys	Val	Leu	
207		50	_	_			55					60					
210	Ser	Pro	Gln	Gly	Gly	Gly	Pro	Trp	Asp	Ser	Val	Ala	Arg	Val	Leu	Pro	
211						70					75					80	
214	Asn	Gly	Ser	Leu	Phe	Leu	Pro	Ala	Val	Gly	Ile	Gln	Asp	Glu	Gly	Ile	
215					85					90					95		
	Phe	Arg	Cys	-	Ala	Met	Asn	Arg		Gly	Lys	Glu	Thr	Lys	Ser	Asn	
219				100		_			105		_	_		110		_	
	Tyr	Arg		Arg	Vai	Tyr	GIn		Pro	СТĀ	Lys	Pro		Ile	Val	Asp	
223	G		115	<b>01</b>	<b>*</b>	m1		120	37 n 1	D	7	T	125	<b>a</b> 1	m la sa	G	
	ser	130	ser	GIU	ьeu	Thr	135	GIY	vaı	Pro	ASII	LуS 140	val	Gly	Thr	Cys	
227	บาโ		Clu	C1**	cor	Trr		λla	C117	Thr.	Lou		Ψrn	His	Lou	λen	
	145	261	GIU	GIY	Ser	150	PIO	AIQ.	СТУ	1111	155	261	115	nrs	Leu	160	
		T.vc	Pro	T.eu	Va 1		Asn	Glu	Lvs	Glv		Ser	Va l	Lys	Glu		
235	011	2,5	110	Leu	165	110		014	1,0	170	, 41	501			175	0111	
	Thr	Arq	Arq	His		Glu	Thr	Gly	Leu		Thr	Leu	Gln	Ser		Leu	
239				180				-	185					190			
	Met	Val	Thr		Ala	Arg	Gly	Gly	Asp	Pro	Arg	Pro	Thr	Phe	Ser	Cys	
243			195			_	_	200	_		_		205			_	
246	Ser	Phe	Ser	Pro	Gly	Leu	Pro	Arg	His	Arg	Ala	Leu	Arg	Thr	Ala	Pro	
247		210					215					220					
250	Ile	Gln	Pro	Arg	Val	${\tt Trp}$	Glu	Pro	Val	${\tt Pro}$	Leu	Glu	Glu	Val	Gln	Leu	
251	225					230					235					240	
	Val	Val	Glu	Pro		Gly	Gly	Ala	Val		Pro	Gly	Gly	Thr		Thr	
255					245					250				_	255		
	Leu	Thr	Cys		Val	Pro	Ala	Gln		Ser	Pro	Gln	Ile	His	Trp	Met	
259	_	_		260	<b>.</b>	<b>-</b> .	_	<b>-</b> .	265	_	<b>a</b> .	_	77. 7	270	- 7	<b>.</b>	
	ьys	Asp	_	vaı	Pro	ьeu	Pro		Pro	Pro	ser	Pro		Leu	тте	∟eu	
263	Dro	C1	275	C1++	Dro	C1 n	λ c.~	280 Cln	C1**	ሞሎ∽	<b>™</b> ***	80~	285 Cvc	Va I	λla	Thr	
266 267	PIO	290	тте	GTÅ	PIO	GTII	295	GTII	стХ	T III.	TAT	300	Cys	Val	нта	1111	
207		230					233					500					

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```
270 His Ser Ser His Gly Pro Gln Glu Ser Arg Ala Val Ser Ile Ser Ile
271 305
274 Ile Glu Pro Gly Glu Glu Gly Pro Thr Ala Gly Ser Val Gly Gly Ser
                    325
                                        330
                                                             335
275
278 Gly Leu Gly Thr Leu Ala Leu Ala Leu Gly Ile Leu Gly Gly Leu Gly
                340
                                    345
279
282 Thr Ala Ala Leu Leu Ile Gly Val Ile Leu Trp Gln Arg Arg Gln Arg
                                360
283
286 Arg Gly Glu Glu Arg Lys Ala Pro Glu Asn Gln Glu Glu Glu Glu Glu
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294 Thr Gly Gly Pro
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299 <211> LENGTH: 1391
300 <212> TYPE: DNA
301 <213> ORGANISM: Human
303 <400> SEQUENCE: 4
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                                                                          120
                                                                          180
308 gececeaaga aaceaeeea geggetggaa tggaaaetga acacaggeeg gacagaaget
                                                                          240
310 tggaaggtee tgteteecea gggaggagge eeetgggaea gtgtggeteg tgteetteee
312 aacggetece tetteettee ggetgteggg atccaggatg aggggatttt ceggtgeagg
                                                                          300
314 gcaatgaaca ggaatggaaa ggagaccaag tccaactacc gagtccgtgt ctaccagatt
                                                                          360
                                                                          420
316 cctgggaagc cagaaattgt agattctgcc tctgaactca cggctggtgt tcccaataag
318 gtggggacat gtgtgtcaga gggaagctac cctgcaggga ctcttagctg gcacttggat
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320 qqqaaqcccc tqqtqcctaa tqaqaaqqqa qtatctqtqa aqqaacaqac caqgaqacac
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322 cctgagacag ggctcttcac actgcagtcg gagctaatgg tgaccccagc ccggggagga
                                                                          600
324 gateceeqte ceaecttete etgtagette ageceaggee tteceegaca eegggeettg
                                                                          660
326 cgcacagece ceatecagee eegtgtetgg gageetgtge etetggagga ggtecaattg
                                                                          720
328 gtggtggage cagaaggtgg agcagtaget cetggtggaa eegtaaeeet gaeetgtgaa
                                                                          780
330 gtccctgccc agccctctcc tcaaatccac tggatgaagg atggtgtgcc cttgcccctt
                                                                          840
                                                                          900
332 ecceecagee etgtgetgat ecteectgag atagggeete aggaecaggg aacetacage
334 tgtgtggcca cccattccag ccacgggccc caggaaagcc gtgctgtcag catcagcatc
                                                                          960
336 atcgaaccag gcgaggaggg gccaactgca ggctctgtgg gaggatcagg gctgggaact
                                                                         1020
338 ctagccctgg ccctggggat cctgggaggc ctggggacag ccgccctgct cattggggtc
                                                                         1080
340 atcttgtggc aaaggeggca acgeegagga gaggagagga aggeeecaga aaaceaggag
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342 gaagaggagg agcgtgcaga actgaatcag tcggaggaac ctgaggcagg cgagagtagt
                                                                         1200
344 actggaggge ettgagggge ceacagaeag ateceateea teageteeet tttetttte
                                                                         1260
346 cettgaactg ttetggeete agaceaacte teteetgtat aatetetete etgtataace
                                                                         1320
348 ccaccttgcc aagctttctt ctacaaccag agccccccac aatgatgatt aaacacctga
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354 <211> LENGTH: 403
355 <212> TYPE: PRT
356 <213> ORGANISM: Mouse
358 <400> SEQUENCE: 5
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364 365	Trp	Gly	Ala	Val 20	Ala	Gly	Gly	Gln	Asn 25	Ile	Thr	Ala	Arg	Ile 30	Gly	Glu
368	Pro	Leu			Ser	Cys	Lys			Pro	Lys	Lys		Pro	Gln	Gln
369			35					40					45			
372 373	Leu	Glu 50	Trp	Lys	Leu	Asn	Thr 55	Gly	Arg	Thr	Glu	Ala 60	Trp	Lys	Val	Leu
376 377		Pro	Gln	Gly	Gly	Pro 70	Trp	Asp	Ser	Val	Ala 75	Gln	Ile	Leu	Pro	Asn 80
		Com	T 011	T 011	T 011		ת 1 ת	mh.~	C1	т1.		N an	Clu	Gly	mbx	
381	_				85				_	90				_	95	
384 385	Arg	Cys	Arg	Ala 100	Thr	Asn	Arg	Arg	Gly 105	Lys	Glu	Val	Lys	Ser 110	Asn	Tyr
388	Arq	Val	Arq	Val	Tvr	Gln	Ile	Pro	Glv	Lvs	Pro	Glu	Ile	Val	Asp	Pro
389	_		115		-			120	_	_			125		_	
	Ala		Glu	Leu	Thr	Ala		Val	Pro	Asn	Lys		GTÄ	Thr	Cys	Val
393		130					135					140				
396	Ser	Glu	Gly	Ser	$\mathtt{Tyr}$	Pro	Ala	Gly	Thr	Leu	Ser	Trp	His	Leu	Asp	Gly
397	145					150					155					160
400	Lys	Leu	Leu	Ile	Pro	Asp	Gly	Lys	Glu	Thr	Leu	Val	Lys	Glu	Glu	Thr
401	-				165	-	-	-		170			-		175	
	Ara	Arσ	His	Pro		Thr	Glv	Leu	Phe	Thr	Len	Ara	Ser	Glu	Leu	Thr
405		•••		180	0_0				185			9	201	190	200	
	Wa 1	Tlo	Dro		Cln	Clv	C117	Thr		Uic	Dro	Πbr	Dho	Ser	Cvc	Cor
	Val	116	195	1111	GIII	ату	СТУ	200	1111	птэ	FIU	1 111	205	Ser	Cys	Ser
409	D1	0		<b>a</b> 1	<b>T</b>	D	3		3	D	T	3			D	T1 -
	Pne		Leu	GLY	ьeu	Pro		Arg	Arg	Pro	Leu		Thr	Ala	PIO	тте
413	_	210		_			215		_			220			_	_
		Leu	Arg	Val	Arg		Pro	GTA	Pro	Pro		GTA	Ile	Gln	Leu	
417						230					235					240
420	Val	Glu	Pro	Glu	Gly	Gly	Ile	Val	Ala		Gly	Gly	Thr	Val	Thr	Leu
421					245					250					255	
424	Thr	Cys	Ala	Ile	Ser	Ala	Gln	Pro	Pro	Pro	Gln	Val	His	Trp	Ile	Lys
425				260					265					270		
428	Asp	Gly	Ala	Pro	Leu	Pro	Leu	Ala	Pro	Ser	Pro	Val	Leu	Leu	Leu	Pro
429			275					280					285			
432	Glu	Val	Gly	His	Ala	Asp	Glu	Gly	Thr	Tyr	Ser	Cys	Val	Ala	Thr	His
433		290	_			_	295	_		_		300				
436	Pro	Ser	His	Gly	Pro	Gln	Glu	Ser	Pro	Pro	Val	Ser	Ile	Arg	Val	Thr
437				-		310					315			_		320
		Thr	Glv	Asp	Glu		Pro	Ala	Glu	Glv		Val	Glv	Glu	Ser	
441	014	1111	011	115P	325	O <sub>1</sub>	110	u	O L u	330	DCI	· u ·	017	0	335	011
	T OIL	Glw	Thr	Lau		T.All	λla	T.Au	C1v		Lan	Clv	Glv	Leu		Va 1
445	пеп	GIY	1111	340	ΑΙα	ьеu	AIG	пец	345	116	пец	GIY	GLY	350	GIY	Vul
	37a 1	310	T 0		370 3	<b>C1</b>	7 J n	T1.		m~~	7 ma	T	7		D=0	7
	Val	Ald		ьец	vai	GTA	нта		Leu	ттр	ALG	гуу		Gln	PIO	AIG
449		<b>~</b> 1	355	3	<b>T</b>	<b>37</b> -	D	360	<b>a</b>	<b>01</b>	<b>~</b> 1	3	365	<b>01</b>	<b>01</b>	3
	arg		GIU	arg	гÀ2	ата		GIU	ser	GID	GIU		GIU	Glu	GIU	Arg
453	_	370				_	375					380		_		
		Glu	Leu	Asn	Gln		Glu	Glu	Ala	GLu		Pro	Glu	Asn	GLY	
457						390					395					400
460	Gly	Gly	Pro													

VERIFICATION SUMMARY

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